

NOTES AND COMMENTS

THE EUROPEAN LADY BEETLE *PROPYLEA* *QUATUORDECIMPUNCTATA*: NEW LOCALITY RECORDS FOR NORTH AMERICA (COLEOPTERA: COCCINELLIDAE)

Propylea quatuordecimpunctata (L.), an important coccinellid predator of cereal aphids in Europe, was first collected in North America near Ste-Foy (Québec Co.), Québec in August 1968 (Chantal 1972). The beetle was collected repeatedly by Chantal at the same locality during the next four seasons, suggesting that the species was already well established when first captured. The origins of the colony are unknown, but the 1968 recovery certainly predates by two years any of the intentional (but unsuccessful) releases of this species made in Delaware, New Jersey, and Oklahoma (Gordon 1985, Rogers et al., 1972). In 1980, Laroche and Larivière presented dates of subsequent collections of this insect in nine more counties in Québec, mostly adjacent to the St. Lawrence River: (1972) Montmorency; (1974) Champlain, Portneuf; (1976) Saint-Maurice; (1977) Ile de Montréal; (1979) Charlevoix-Est, Charlevoix-Ouest, Laprairie, and Levis. It is my purpose here to provide seven additional county records for *P. quatuordecimpunctata* which extend the known distribution of this exotic species in southern Québec and into the United States.

In 1984, personnel of the Québec Department of Agriculture (SRDC) collected specimens of *P. quatuordecimpunctata* in two more Québec counties: Deux Montagnes and Montmagny (M. O. Guibord, SRDC, Complexe Scientifique, Ste-Foy, Québec, *in litt.*). The first U.S. collections were taken by B. Parker in Vermont, in Grand Isle Co. in 1984, and in Chittenden Co. in 1985 (R. T. Bell, Dept. Zoology, Univ. Vermont, Burlington, *in litt.*).

During early June 1986, I collected this beneficial species while sweeping alfalfa, vetch, and roadside weeds in southern Québec. These collections resulted in two new county records in Québec: Rouville Co. (near St. Hilaire) and Stanstead Co. (near Massawippi), plus one new record in New York: Clinton Co. (at Plattsburgh). The identity of specimens from both New York and Vermont was confirmed by R. D. Gordon (Systematic Entomology Laboratory, USDA-ARS, Washington, D.C.).

The known distribution (Fig. 1) stretches for approximately 420 km and probably encompasses over 36,000 km². It is doubtful that the insect has dispersed much further southward than illustrated, because our recovery attempts in adjacent counties were negative during the 1986 season. Assuming that the beetle has dispersed from the 1968 find at Ste-Foy, Québec to the 1986 find at Plattsburgh, New York, one can estimate the average rate of movement during those 18 years at 16 km/year. In view of this rather slow dispersal rate, I would suggest that the beetle should be recolonized at distant sites to assist its spread.

Although the origins of the establishment in Québec are unclear, based on the distribution pattern thus far known, I tend to agree with Laroche and Larivière (1980) who suggest the possibility of an accidental introduction of the beetle from European vessels moving along the St. Lawrence Seaway. Considering its ability to

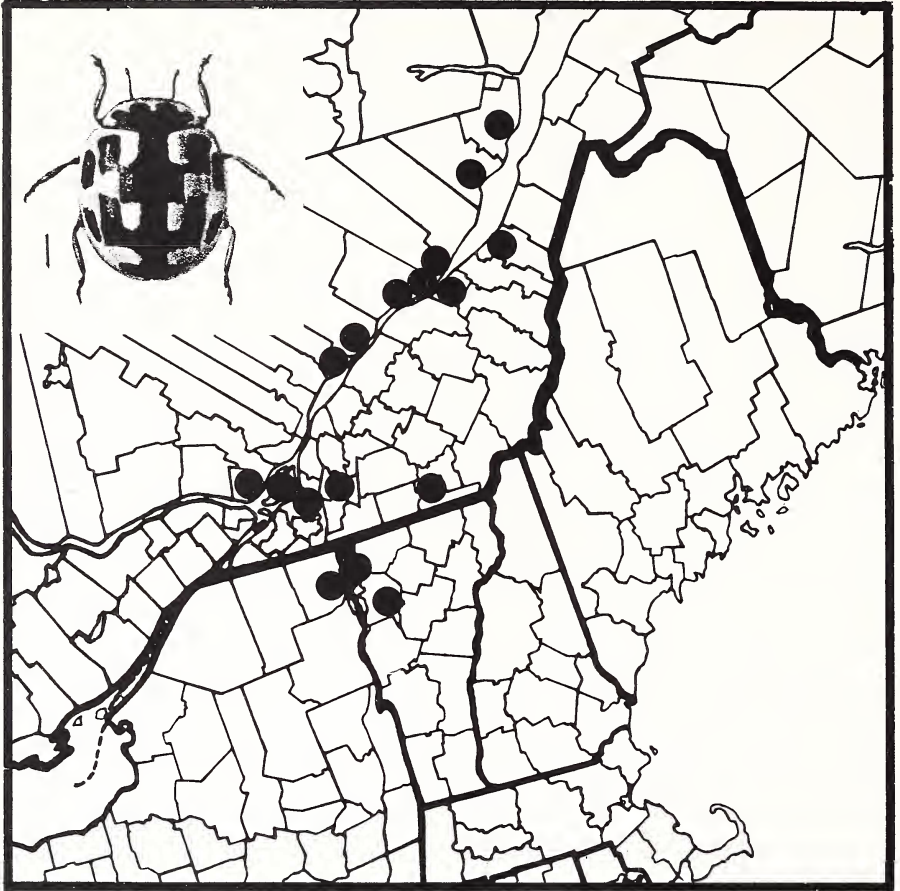


Fig. 1. Known distribution of *Propylea quatuordecimpunctata* in North America. Habitus drawing of adult adapted from Moreton, 1969 (elytral pattern is variable).

exist over a wide area in the Palearctic region and its successful adaptation to the harsh climate of Québec, it seems likely that *P. quatuordecimpunctata* will eventually extend its range throughout much of North America.—Richard J. Dysart, USDA-ARS, Beneficial Insects Research Laboratory, 501 S. Chapel St., Newark, Delaware 19713.

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PREY CARRIAGE ON THE STING BY *SERICOPHORUS RELUCENS* (HYMENOPTERA: SPHECIDAE: LARRINAE)

Most species of sphecid wasps use their mandibles or legs to carry their prey as they fly back to their nests (Evans, 1962; Genise, 1980). Transporting the prey on the sting is known from only a few species in the Crabroninae (Evans, 1962; Peckham et al., 1973; Genise, 1980). I report here the carriage of prey on the sting by a member of the Larrinae, *Sericophorus relucens* F. Smith.

I observed a female of *S. relucens* catch a *Musca vetustissima* Walker from a group of bushflies circling my head, at 14:08 on 11 Dec 1985, at Camp Pincham in Warumbungles National Park, New South Wales, Australia. The wasp, grappling with the fly, landed on the ground near my feet and stung it in the ventral part of the thorax. Through binoculars I watched as she made two short (5-15 cm) flights with the fly impaled on her sting. She then flew off and I caught her in a net where the bushfly was clearly seen to be still impaled on her sting. The fly was dislodged from the sting for the first time when they were placed in a vial. A week previously I had observed another female of *S. relucens* catch a bushfly. Her actions reminded me of *Oxybelus uniglumis* (Linnaeus), a species that transports prey on its sting, prompting me to watch closely when it happened again.

Transporting prey on the sting is unusual in the Sphecidae. The primitive and most common type of prey transport is using the mandibles (Evans, 1962; Genise, 1980). Many genera use the middle legs as the principal support for their prey, while only 3 genera use the hind legs. Two of these 3 genera, *Oxybelus* and *Sericophorus*, are those which include species that transport prey on the sting (Peckham et al., 1973; Matthews and Evans, 1970). *Sericophorus* therefore, provides another example of the evolutionary trend described by Evans (1962) of the shift of prey further back for transport.

Both *S. relucens* and the several species of *Oxybelus* that carry their prey on their sting, prey upon Diptera (Peckham and Hook, 1980). Steiner (1978, 1979) has shown in *O. uniglumis* that a single sting is directed toward the one major fused ganglionic mass of the fly. He has also shown, at least in the captive situation, that the sting is